CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
AIR MANAGEMENT SERVICES

Plan Approval

Approval No: 15271 Amendment Date: April 25, 2017
Plant ID: 01501 Original Issue Date: December 29, 2003

Owner: Philadelphia Energy Solutions Refining and Marketing, LLC (PES)

Location: 3144 Passyunk Ave
Philadelphia, PA 19145

Source: PES
Address: 3144 Passyunk Ave
Philadelphia, PA 19145
Email: Charles.Barksdale@pes-companies.com

Attention: Mr. Chuck Barksdale
Environmental Manager

Pursuant to the provisions of Title 3 of the Philadelphia Code, the Air Management Code of February 17, 1995, as amended, and after due consideration of the Plan Approval application and its associated SO_2 modeling results received under the rules and regulations of the Philadelphia Air Pollution Control Board, the City of Philadelphia Department of Public Health Air Management Services (AMS) on April 25, 2017, approved plans for the installation of the air contamination device(s) described below:

A Tier II low sulfur gasoline Hydrodesulfurization Plant including:

- Process Heater H1- 97 Million British Thermal Unit per hour (MMBTU/hr)
- Process Heater H2 - 53 MMBTU/hr
- One 136,000 barrels (bbl) Refurbished Gasoline Tank

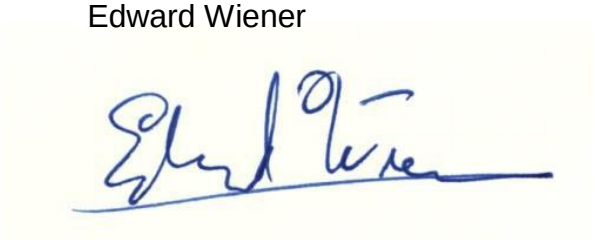
April 25, 2017 – This amends and replaces the original Plan Approval No. 02184 issued December 29, 2003 and amended May 12, 2004. The following are changes or revisions from the original Plan Approval No. 02184.

- **Include work standards practices standards of 40 CFR 63 Subpart DDDDD, Table 3 for the H1 and H2 Heaters.**
- **Update the Plan Approval with the Tier 3 emissions (AMS Plan Approval No. 15253 dated 9/22/2016) for the 870 H1 and H2 Heaters .**
- **Modify Condition 23 to allow subsequent CO performance tests to be repeated every five years instead of every year. The protocol shall be submitted at least 30 days prior to testing.**
- **Incorporate the permit requirements for South Flare. The South Flare was reactivated and is covered under Plan Approval 13260 dated July 18, 2014.**

PLAN APPROVAL CONDITIONS
PLAN APPROVAL NO. 15271
COMPANY: PES

This plan approval expires on October 25, 2018. If modification has not been completed by this date, an application for either an extension or a new plan approval must be made. The conditions in this plan approval will remain in effect until they are incorporated in an operating permit.

Edward Wiener



Chief, Source Registration

PLAN APPROVAL CONDITIONS
PLAN APPROVAL NO. 15271
COMPANY: PES

1. The sources covered by this plan approval shall be installed in accordance with the specifications in the application (as approved herein).

2. PES shall operate the Hydrodesulfurization Plant and associated equipment in accordance with 40 CFR 60.18, 40 CFR 60 Subparts J, GGG, and QQQ, 40 CFR 61 Subpart FF, 40 CFR 63.11, 40 CFR 63 Subpart CC, 40 CFR 63 Subpart DDDDD, PA DEP Title 25 Sections, 127.12.a.5, 123.41, 129.55, 129.56, 129,58, and Air Management Regulation (AMR) II and III, whichever is more restrictive.

3. This plan approval may be terminated, suspended or revoked and reissued in accordance with 25 PA Code § 127.13a. If AMS or EPA determines that the owner or operator of PES is liable for violations of the New Source Review (NSR) or Prevention of Significant Deterioration (PSD) Requirements, PES shall submit an application to amend this plan approval and or any subsequently amended operating permit.

4. Upon notification, PES shall remodel for Sulfur Dioxide (SO_2) to demonstrate compliance with National Ambient Air Quality Standards (NAAQS) when AMS has cause to believe that the attainment or maintenance of the NAAQS is in jeopardy.

5. The Permittee shall comply with the following:
   (a) Emissions from the Tier 2 Project shall not exceed those listed in the Table 1a:

Table 1a: Emission Limits and Increases for Tier 2 - Project [AMS Plan Approval No. 02184]

Source	NOx		CO		VOC		SO2		PM/PM10	
	Lb/hr	tpy*	Lb/hr	tpy*	Lb/hr	tpy*	Lb/hr	tpy*	Lb/hr	tpy*
Heater H1	3.40	14.87	14.04	61.50	0.52	2.29	3.88	16.99	0.18	0.79
Heater H2	1.86	8.12	4.37	19.13	0.29	1.25	2.12	9.29	0.1	0.43
Tank TK178	na	na	na	na	2.12	9.28	na	na	na	na
Flare (PB So.)	0.12	0.53	0.66	2.88	0.25	1.09	8.53	37.36	na	na
Fugitives	na	na	na	na	0.31	1.38	na	na	na	na
Ancilliary										
No. 3 BH	3.45	15.11	1.90	8.30	0.12	0.54	0.92	4.03	0.04	0.19
Cooling Tower	na	na	na	na	0.39	1.71	na	na	0.22	0.98
SRU	0.02	0.10	0.02	0.09	<0.01	0.01	0.21	0.92	<0.01	<0.01
Total		38.73		91.90		17.55		68.59		2.39

* All annual limits are 12 month rolling averages

(b) Emissions from the 870 H-1 heater shall not exceed the following limits in Table 1(b). These limits will not go into effect until the modifications to the Unit 870 LSG Unit listed above including the installation of the new splitter tower is complete and the unit has commenced operation in the Tier 3 configuration. [AMS Plan Approval No. 15253 dated September 22, 2016]

Table 1(b): 870 H-1: Tier 3 Emission Limits

Source	Parameter	Limit	Notes
870 H-1	NOx emissions	(a) NOx emissions shall not exceed 0.035 lb/MMBtu based on the average of three stack test runs.	Plan Approval No. 02184. Compliance shall be demonstrated by an AMS-approved stack test.
		(b) NOx emissions shall not exceed 12.32 tons per rolling 12 month period.	Application. Compliance shall be demonstrated by an AMS-approved stack test.
	VOC emissions	(c) VOC emissions shall not exceed 0.17 tons per rolling 12 month period.	Application. Compliance shall be demonstrated by an AMS-approved stack test.
	Operational Limits	(d) Firing duty shall not exceed 97.0 MMBtu/hr on a daily average basis.	Reasonably Available Control Technology (RACT) 25 Pa. Code §§129.91 through 129.94 for (d).
		(e) Firing duty shall not exceed 849,720 MMBtu on a rolling 365-day basis.	Application

(c) The 870 H-2 heater shall not exceed the following limits in Table 1(c). These limits will not go into effect until the modifications to the Unit 870 LSG Unit listed under Plan Approval No. 15253 including the installation of the new splitter tower is complete and the unit has commenced operation in the Tier 3 configuration.

Table 1(c): 870 H-2 Tier 3 Emission Limits

Source	Parameter	Limit	Notes
870 H-2	NOx emissions	(a) NOx emissions shall not exceed 0.035 lb/MMBtu based on the average of three stack test runs.	Plan Approval No. 02184. Compliance shall be demonstrated by an AMS-approved stack test.
		(b) NOx emissions shall not exceed 6.50 tons per rolling 12 month period.	Application. Compliance shall be demonstrated by an AMS-approved stack test.
	VOC emissions	(c) VOC emissions shall not exceed 0.21 tons per rolling 12 month period.	Application. Compliance shall be demonstrated by an AMS-approved stack test.
	Operational Limits	(d) Firing duty shall not exceed 53.0 MMBtu/hr on a daily average basis.	Reasonably Available Control Technology (RACT) 25 Pa. Code §§129.91 through 129.94
		(e) Firing duty shall not exceed 464,280 MMBtu per rolling 365-day period.	Application.

Table 2: Tier 2, Contemporaneous emission changes for NSR

Year	Project	NOx tpy	VOC tpy
2000	Benzene RR car unloading	0	0.01
2002	Unit 868 Modification	0	3.60
2003	Unit 1232 Maintenance work	0	0.38
2004	Tier II (current application)	38.73	17.55
	Netting Total	38.73	21.54
2004	Internal offset (1.3 X 38.73) from operating restrictions at No.3 Boilerhouse**	-50.35	0
	Net change	-11.62	21.54

** From operating restrictions for emission limit specified in Condition 6.

Table 3: Tier 2, Emission change for PSD

Project	NO2 tpy	SO2 tpy	CO tpy	PM/PM10 tpy
Tier II Project	38.73	68.59	91.90	2.39/2,39
Heater 13H1 Fuel Switch		-29.70***		
Net change	38.73	38.89	91.90	2.39/2.39

*** From operating restrictions specified in Condition 7.

6. Nitrogen Oxides (NOx) emissions from No.3 Boilerhouse shall not exceed 970.5 tons in any rolling 12-month period.

7. PES shall burn only refinery fuel gas and/ or natural gas in the 210 Unit 13H1 Heater from the date of issuance of this plan approval. The SO_2 emissions from this heater shall not exceed 11.01 tons in any rolling 12-month period.

8. The NOx emissions from heaters H1 and H2 shall not exceed 0.035 lb/MMBTU.

9. The opacity of visible emissions from the heaters and the flare shall not be:
   (a) Equal to or greater than 20% for a period or periods aggregating more than three (3) minutes in any one hour
   (b) Equal to or greater than 60% at any time [25 PA Code § 123.41]
   (c) For the South Flare, The flare shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [40 CFR 63.11(b)(4) and 40 CFR 60.18(c)(1)] [AMS Plan Approval No. 13260 dated July 18, 2014]

10. Carbon Monoxide emissions from heaters H1 and H2 shall not exceed 400 ppmdv at 3% oxygen. [25 PA Code 127.1 (BAT)]

Work Practice Standards

11. PES shall operate and maintain the sources in accordance with the manufacturer's specifications and good engineering and air pollution control practices.

12. Heaters H1 and H2 shall be equipped with ultra low NOx burners with internal flue gas recirculation and combust refinery fuel gas and/or natural gas only. The heat input shall not exceed 97 MMBTU/hr to H1 and 53 MMTU/hr to H2. [25 PA Code § 127.12(a)(5)]

13. The Permittee shall not burn any fuel gas containing H2S in excess of 162 ppmv in the flare. The H2S content in the fuel gas shall be determined hourly on a 3-hour rolling average basis. The combustion in the flare of process upset gases or fuel gas that is released to the flare as the result of relief valve leakage or other emergency malfunctions is exempt from the above limit .[40 CFR 60.103a(h) and 40 CFR 60.103a(f)]

14. Hydrogen Sulfide content of the fuel gas burned in the heaters shall not exceed 0.1 grains per dry standard cubic foot or the concentration of SO_2 emissions in the stack gases shall not exceed 20 ppmv (dry basis, zero percent excess air) [40 CFR 60.104(a)(1)]

15. The South Yard Flare shall comply with the following work standard requirements: [AMS Plan Approval No. 13260 dated July 18, 2014]

    (a) The South Yard South Flare shall be operated in accordance with the manufacturer's specifications and specifications in the Plan Approval Application.
    (b) The South Yard South Flare shall comply will all applicable requirements set-forth in 40 CFR 60 Subpart A and Ja, 40 Subpart 63 Subpart A, and the Consent Decree.
    (c) The flare shall be operated at all times when gases may be vented to them. The flare shall be operated with a minimum of a 98% Combustion Efficiency at all times when waste gases are vented to it. [40 CFR 63.643(a)(1), 40 CFR 63.11(b)(3), 40 CFR 60.18(e)]
    (d) The flares shall be operated with a pilot flame present at all times. [40 CFR 63.11(b)(5), 40 CFR 60.18(f)(2)]
    (e) The Permittee shall operate and maintain a flare gas recovery system to prevent continuous or routine combustion in the flare. [Consent Decree, Use of the flare gas recovery system obviates the need to continuously monitor emissions as otherwise required by 40 CFR 60.105(a)(4)]
        (i) Periodic maintenance shall be conducted for flare gas recovery systems.
        (ii) All reasonable measures shall be taken to minimize emissions during the periodic maintenance on a flare gas recovery system is being performed.
        (iii) The flare gas recovery system may be bypassed in the event of an emergency or in order to ensure safe operation of refinery processes.
    (f) The flare (steam-assisted flare) shall be used only when the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f)(3). [40 CFR 60.18(c)(3)(ii)]
    (g) The flare (steam-assisted flare) may be designed and operated with an actual exit velocity less than Vmax and less than 122m/sec (400 ft/sec) [40 CFR 60.18(c)(4)(iii)]
        (i) Actual exit velocity shall be determined in accordance with 40 CFR 60.18(f)(4)
        (ii) Vmax shall be determined in accordance with 40 CFR 60.18(f)(5)
    (h) The Permittee shall implement good air pollution control practices to minimize Hydrocarbon Flaring Incidents in accordance with the procedures in the Consent Decree.
    (i) The Permittee shall develop and implement a written flare management plan no later than the November 11, 2015 in accordance with 40 CFR 60.103a .
        (i) The Permittee shall conduct a root cause analysis and a corrective action analysis for each of the following [Consent Decree and 40 CFR 103a(c)]
        (ii) Any time the SO2 emission exceeds 227 kilograms (kg) (500 lbs) in any 24-hour period
        (iii) Any discharge to the flare in excess of 14,160 standard cubic meter (m3) (500,000 standard cubic feet (scf)) above the baseline, determined in 40 CFR 60.103a(a)(4)
    (j) The Permittee shall complete a root cause analysis and corrective action analysis as soon as possible, but no later than 45 days after a discharge meeting one of the conditions specified Condition (j) above . Special circumstances affecting the number of root cause analyses and/or corrective action analyses are as follows: [40 CFR 60.103a(d)]

(i) If a single continuous discharge meets any of the conditions specified in Condition 23(i)(i)-(iii) for 2 or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted.

(ii) If a single discharge from a flare triggers a root cause analysis based on more than one of the conditions in Condition (i)(i) - (iii), a single root cause analysis and corrective action analysis may be conducted.

(iii) If the discharge from a flare is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare and the procedures in 40 CFR 60.103a(a)(5) were followed, a root cause analysis and corrective action analysis is not required; however, the discharge must be recorded as described in §60.108a(c)(6) and reported as described in §60.108a(d)(5).

(iv) If both the primary and secondary flare in a cascaded flare system meet any of the conditions specified in 40 CFR 60.103a(c)(1)(i)-(iii) in the same 24-hour period, a single root cause analysis and corrective action analysis may be conducted.

(v) Except as provided above in Condition (j) above, if discharges occur that meet any of the conditions specified in Condition (i above for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility. If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

(k) The Permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to Condition (j) above in accordance with the following applicable requirements: [40 CFR 60.103a(e)]

(i) All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If the Permittee concludes that corrective action should not be conducted, the Permittee shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in 40 CFR §60.108a(c)(6)(ix).

(ii) For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(iii) No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the Permittee shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in 40 CFR§60.108a(c)(6)(x).

17. The storage tank shall be external floating roof construction meeting specifications in 40 CFR § 60.112b(a)(2)(i) through (iii). The tank shall be in conformance with 40 CFR § 63.646.

18. PES shall not store VOC liquids that have a reid vapor pressure greater than 10 psia in the storage tank.

19. PES shall comply with fugitive emission requirements specified in 25 PA Code § 129.58, 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC.

20. PES shall identify and list components of the Hydrodesulfurization Plant that are in Hydrogen service, prior to issuance of an operating permit.

21. All new and existing wastewater drain systems utilized for this project shall comply with 40 CFR 60 Subpart QQQ, 40 CFR 61 Subpart FF and 40 CFR 63 Subpart CC.

22. For H1 and H2 Heaters, the Permittee shall comply with the following work standard practices of 40 CFR 63, Subpart DDDDD, Table 3.
    (a) Conduct a tune-up of the boiler or process heater annually as specified in §63.7540. Each annual tune-up specified in §63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up.
    (b) Each boiler must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:

a. A visual inspection of the boiler or process heater system.
b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.
d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
e. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.
f. A list of cost-effective energy conservation measures that are within the facility's control.
g. A list of the energy savings potential of the energy conservation measures identified.
h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

Testing

23. The Permittee shall comply with the following testing requirements:
    (a) Tier 2 - Testing Requirements
        (i) Within sixty (60) days after achieving maximum production rate but not later than one hundred and eighty (180) after the initial startup of the 870 Unit Hydrodesulfurization plant PES shall conduct performance test(s) as per Sections 40 CFR 60.8, 40 CFR Part 60, Subpart J and 25 PA Code Chapter139 on each to demonstrate compliance with emission increases specified in Conditions 8 and 10 and to establish emission factors to demonstrate compliance with emissions limits specified in Tables 1a. [AMS Plan Approval No.02184 dated December 29, 2003 and amended May 12, 2004;
        (ii) The stack test for CO shall be repeated every five years or upon request from AMS.[Plan Approval Application No. 15271 to modify CO testing frequency from annually to every five year.]
    (b) Tier 3 Testing Requirements.

(i) For Unit 870 H-1 and H-2 Heaters, within 60 days of completion of the Tier 3 project, the Permittee shall conduct NOx and VOC tests to verify that emissions do not exceed the emission factors in Conditions 5(b) and 5(c). [AMS Plan Approval No. 15253 dated September 9, 2016]

(c) Prior to any testing, a stack test protocol shall be submitted to AMS at least 30 days before the test. Stack test results shall be submitted within 60 days after the test.

24. For the storage tank, PES shall follow testing procedures specified in 40 CFR 60.113b. If a failure is detected, PES shall repair the items or empty and remove the storage vessel from service within 45 days. If this cannot be done in 45 days, AMS shall be notified and a 30-day extension may be requested from AMS. PES shall assure that either the equipment is repaired or the tank is emptied within the 30 additional days.

25. For the South Flare, PES shall comply with the following: [AMS Plan Approval No. 13270 dated July 18, 2014]

(a) Within 60 days of start-up of the flare, the Permittee shall conduct performance test as follows:

(i) Test Method 22 in Appendix A of 40 CFR 60 shall be used to determine the compliance of flares with the visible emission limitations. The observation period is 2 hours and shall be used according to Method 22. [40 CFR 63.11(b)(4), 40 CFR 60.18(f)(1)]

(ii) The net heating value of the gas being combusted in a flare shall be calculated using the following equation [40 CFR 60.18(f)(3)]:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

C_i=Concentration of sample component "i" in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77; and

H_i=Net heat of combustion of sample component i, kcal/g mole at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 if published values are not available or cannot be calculated.

(iii) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [40 CFR 60.18(f)(4)]

(i) In lieu of conducting the velocity test , the Permittee may submit velocity calculations which demonstrate that the Flare meets the performance specification required by 40 CFR 60.18

(iv) The maximum permitted velocity, V_{max}, for flares complying with 40 CFR 60.18(c)(4)(iii)) shall be determined by the following equation: [40 CFR 60.18(f)(5)]

$$\text{Log10}\ (V_{max}) = (HT + 28.8)/31.7$$

where:

V_{max}=Maximum permitted velocity, M/sec

28.8 = Constant
31.7 = Constant
H_T=The net heating value as determined in 40 CFR 60.18 (f)(3).

Monitoring

26. PES shall on a daily basis monitor and record the quantity and heating value of the refinery fuel gas that is combusted in heaters 210 Unit 13 H1, 870 Unit H1, 870 Unit H2, and the flare. Fuel consumption in Boilerhouse No.3 shall be monitored daily.

27. NOx emissions from Boilerhouse No.3 shall be monitored using a continuous emission monitoring system.

28. PES shall monitor and record the concentration (dry basis) of Hydrogen Sulfide in fuel gases burned in Heaters H1, H2, and the flare using a continuous monitoring system to ensure compliance with Condition 14. As an alternative PES may monitor and record the concentration by volume (dry basis, zero percent excess air) of SO_2 emissions in the stacks using a continuous emission monitoring and recording system. The system shall include an oxygen monitor for correcting the data for excess air. [40 CFR § 60.105(A)(4)]

29. For the South Flare, the Permittee shall monitor the following:
    (a) The Permittee shall continuously monitor and record the H2S concentration for fuel gases being burned in the flare in accordance with 40 CFR 60.107a(a)(2).
    (b) The Permittee shall continuously monitor and record the flow rate of gas discharged to the flare. [40 CFR 60.107a(f)]
    (c) The total reduced sulfur concentration for each gas line directed to the flare shall be monitored in accordance with either paragraph 40 CFR 60.107a(e)(1), (e)(2) or (e)(3). [40 CFR 60.107a(e)]

30. The Permittee shall submit the flare management plan to AMS and EPA in accordance with 40 CFR 60.103a(b) no later than November 11, 2015.

31. PES shall monitor all equipment associated with this plan approval for leaks in accordance with 25 PA 129.58 and 40 CFR subpart GGG.

32. For the South Flare, PES shall monitor the following [AMS Plan Approval No. 13260 dated July 14, 2014]:
    (a) Fuel type and fuels usage of the fuel burned for each flare pilot on a daily basis.
    (b) H2S in the refinery fuel gas fired at the pilot shall be monitored using a continuous monitor and recorder at the Point Breeze Fuel Gas Mix Drum.
    (c) The feed to the flares has not exceeded the worst case scenario used in the modeling demonstration. The Permittee shall determine SO2 emissions using the same analysis and calculations used in the modeling demonstration. [SO2 Operating Permit]
    (d) The presence of a flare pilot flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.[40 CFR 63.11(b)(5), 40 CFR 60.18(f)(2)]
    (e) The flare flame shall be monitored using an IR camera.

Recordkeeping

33. PES shall on a monthly basis keep records of the emissions from all new or reactivated sources covered by this plan approval to demonstrate compliance with the emission limits listed in Table 1a.

34. PES shall maintain records to demonstrate compliance with the NOx emission limits for Boilerhouse No. 3, specified in Condition 6, on a monthly basis. NOx emissions shall be calculated based on CEM data. When CEM data is not available, the highest hourly value out of the most recent 365-day period of available NOx CEM data shall be used.

35. PES shall keep the following records for the flare:
    (a) Continuous record of the presence of a pilot flame;
    (b) Fuel types and fuel usage on a daily basis;
    (c) The date, time, and duration of each flaring incident, the cause of the flaring incident, the flow rate of gases being sent to the flare during each flaring incident, and the amount of each pollutant emitted during each incident.
    (d) Discharges greater than 500 lb SO_2 in any 24-hour period from the flare. Records shall be recorded no later than 45 days following the end of a discharge exceeding the thresholds. The records shall include information as required in 40 C_FR 60.108a(c)(6). [Consent Decree and 40 CFR 60.108a(c)(6)]
    (e) A copy of the Flare Management Plan.[40 CFR 60.108a(c)(1)]
    (f) If the monitoring option in 40 CFR 60.107a(e)(2) is used, the Permittee shall keep records of the H_2S and total sulfur analyses of each grab or integrated sample, the calculated daily total sulfur-to-H_2S ratios, the calculated 10-day average total sulfur-to-H_2S ratios and the 95-percent confidence intervals for each 10-day average total sulfur-to-H_2S ratio. [40 CFR 60.108a(c)(7)]
        (i) Root cause analysis
        (ii) Stack tests conducted on the flare.

36. PES shall maintain the following records:
    (a) Continuous H_2S or stack SO_2 monitoring records for heaters (H1 H2).
    (b) Monthly records for heater 13H1 to demonstrate compliance with the emission limit specified in Condition 7 based on daily analysis of H_2S content in the refinery fuel gas used.
    (c) Records of stack test results;
    (d) Records of maintenance per Condition 11;
    (e) Manufacturer's specifications and recommendations;
    (f) Records of the components in Hydrogen service.
    (g) Annual tune ups conducted on each heater;
    (h) Energy assessments conducted on each heater.

37. All records shall be kept for minimum five (5) years and produced upon request by AMS.

Reporting

38. PES shall submit an excess emission and continuous monitoring system performance report and/or a summary report to AMS and the EPA Administrator semiannually. The report shall include when and how long the pilot flame was not present in the flare. [63.10(e)(3)]

39. PES shall report semiannually all rolling 3-hour periods during which the average concentration of H_2S in fuel gas exceeded 0.1 grains per dscf or all rolling 3-hour periods during which the average concentration of SO_2 in the stack exceeded 20 ppmv (dry basis, zero percent excess air).
    [40 CFR 60.105(e)(3), 40 CFR 60.7(c)]

40. For the storage tank, PES shall follow reporting procedures specified in 40 CFR 60.115b and 116b.

41. PES shall, within two hours of any occurrence of any malfunction of the sources described in this permit which results in, or may possibly result in the emission of air contaminants in excess of the limitations specified above, notify AMS by calling (215) 685-7572 during business hours and (215) 686-4514 during other times. Malfunction(s) which occur at this facility, and pose(s) an imminent danger to public health, safety, welfare and the environment, and would violate permit conditions if the source were to continue to operate after the malfunction, shall immediately be reported to AMS by telephone at the above number. A written report shall be submitted to AMS within two working days following the (notification of the) malfunction, and shall describe, at a minimum, the nature and degree of malfunction(s), the emission(s) of each pollutant, the duration of malfunction(s) and any corrective action taken.

42. For the South Flare,
    (a) PES shall submit an excess emissions reports for all periods of excess emissions as defined in 40 CFR 60.107a(i)(2)(i) in accordance with 40 CFR 60.108a(d)
    (b) All notifications required in 40 CFR 60 Subpart Ja shall be submitted to the following address: [40 CFR60.103a(b)(3)]

U.S. Environmental Protection Agency,
Office of Air Quality Planning and Standards, Sector Policies and Programs Division,
U.S. EPA Mailroom (E143-01),
Attention: Refinery Sector Lead,
109 T.W. Alexander Drive,
Research Triangle Park, NC 27711.

Electronic copies in lieu of hard copies may also be submitted to refinerynsps@epa.gov

    (c) The Permittee shall follow the same investigation, reporting, and corrective action procedures as those set forth in Section V.K for Acid Gas Flaring Incidents of the Consent Decree. The results of this will be submitted with the Semi-Annual CD Report.
    (d) The Permittee shall submit an excess emission and continuous monitoring system performance report and/or a summary report to the EPA Administrator and AMS semiannually stating when and how long the pilot flame was not present. [40 CFR 63.10(e)(3)]
    (e) The Permittee shall submit CEM report for the H2S to Air Management Services on a quarterly basis. CEM reports must meet the requirements of the PA CSMM.